

15 April 2024

This announcement contains inside information

88 Energy Limited

HICKORY-1 FLOW TEST – SECOND LIGHT OIL DISCOVERY

Highlights

- Dual reservoir success at Hickory-1 with **second light oil discovery at the SMD-B reservoir**.
- Peak flow rate of ~50 barrels of oil per day (**bopd**) of light oil (measuring approx. 39-degree API oil gravity, under nitrogen lift).
- The SMD-B reservoir showed little to no measurable associated gas flow (low Gas-oil-Ratio (**GoR**), which validates the pre-test analysis).
- Hickory-1 has now delivered two successful oil flows and three independent discoveries:
 - **SMD-B** (today's result): with a peak flow rate of ~50 bopd of light oil (measuring approx. 39-degree API oil gravity, under nitrogen lift).
 - Upper SFS (**USFS**) (previously announced on 2 April 2024): with a peak flow rate of over 70 bopd of light oil (measuring approx. 40-degree API oil gravity, under natural flow).
 - Both flow rates result from low volume stimulations over small 20ft perforated intervals in vertical well.
 - Previously announced **Basin Floor Fan (BFF)** Gross Best Estimate (**2C**) Contingent Resource of 250 Million Barrels of Oil Equivalent (**MMBOE**) (refer 88E ASX release dated 6 November 2023)
- Quality and deliverability of both SMD-B and USFS demonstrated via oil production to surface with the USFS reservoir producing **under natural flow** – positively differentiating Hickory-1 from results on adjacent acreage.
- It is anticipated that these reservoirs will be developed from long horizontal production wells which typically produce at multiples of between 6 to 12 times higher than vertical wells. Project Phoenix also benefits from the ability to produce concurrently from multiple reservoirs in a single development scenario.
- Well testing results from the current field season confirm **long-held views of the producibility of multiple reservoirs at Project Phoenix**.
- As such, the Hickory-1 flow test results can be rightly characterised as in-line with those observed from equivalent reservoirs on adjacent acreage. Importantly, the performance of the USFS reservoir exceeded expectations, with the well flowing naturally with increasing oil cut.
- The results from the Hickory-1 flow tests permits an independent Contingent Resource assessment for both the SFS and SMD reservoirs; expected to be complete during 2H 2024.
- Project Phoenix JV to conduct post-test studies for integration into existing models allowing refined development planning for all reservoirs; studies to commence 2H 2024.
- Commercialisation options to be advanced in parallel, including farm-out to a strategic development partner and/or early, capital-lite production, given proximate infrastructure advantages (Hickory-1 next to Dalton Highway and Trans-Alaskan Pipeline System (TAPS)).

88 Energy Limited (ASX:88E, AIM:88E, OTC:EEENF) (**88 Energy** or the **Company**) is pleased to announce further successful flow test results from the Company's Hickory-1 discovery well, located in Project Phoenix on the North Slope of Alaska (88 Energy ~75% WI owner).

Managing Director, Ashley Gilbert, commented:

"Having now successfully demonstrated light oil flow from two reservoirs at Hickory-1 in recent weeks, it is clear that this is a significant milestone in the history of 88 Energy. The USFS success represents the first time that we have successfully flowed oil to surface in Alaska – and under natural flow – as well as being the first time we have confirmed a light oil discovery of substantial scale in close proximity to the critical Dalton Highway and Trans-Alaskan Pipeline System infrastructure. To then achieve a second successful flow of light oil from the SMD-B reservoir, with a low gas/oil ratio, is an outstanding outcome for 88 Energy and its shareholders.

The flowing of light oil from multiple reservoirs demonstrates the potential that this acreage holds for our shareholders, positioning the Company to grow and extract value from Project Phoenix via multiple potential development and commercialisation pathways. These include farm-out to a strategic partner in pursuit of a carry towards a development proposition and/or accelerated, capital-lite production given the highly development-friendly location of Hickory-1 within the North Slope. Development of these reservoirs is anticipated to be via long horizontal production wells, with numerous production analogues elsewhere demonstrating many multiple times the flow rates achieved from vertical wells.

Detailed evaluation of these development options, and pursuit of the optimal pathway, is the process that we are now set to undertake over the coming months. This work will be undertaken alongside the assessment of independent Contingent Resource declarations for the SFS and SMD reservoirs at Hickory-1, which will be additive to the BFF Contingent Resource previously declared. It is a busy and exciting time ahead for 88 Energy."

SMD-B flow test results; further detail

A 20ft perforated interval in the SMD-B reservoir was stimulated via a single fracture stage comprising 226,967 lbs of proppant volume. The well was cleaned-up and flowed for 84 hours in total, utilising nitrogen lift throughout the entire test period. The average fluid flow rate over the duration of the flow back period was approximately 445 bbls/d, with choke sizes ranging from 8/64ths to 33/64ths.

The SMD-B test produced at a peak estimated flow rate of ~50 bopd. Oil cuts varied throughout the flow back period, reaching a maximum of 10% oil cut. The well produced at an average oil cut of 4% following initial oil to surface, with instantaneous rates observed during the 16-hour period varying as the well cleaned up. Some 70% of stimulation fluid had been recovered at the conclusion of the test at which time water salinity measurements indicated that stimulation fluid was still being recovered and the well was still cleaning up. Oil cut would be expected to improve once stimulation fluid was fully recovered.

Multiple oil samples were recovered, with measured oil gravities of between 38.5 to 39.5 API, representing a light crude oil.



Figure 1: Light oil sample from the SMD-B flow test.

Importantly, the SMD-B zone flowed oil to surface with little to no measurable gas, representing a low GoR production rate. Pressurised oil samples collected during both the USFS and SMD tests will be transported to laboratories for further analysis.

The SMD-B flow test was concluded with sufficient information for the next steps, and the data recorded will assist 88E in optimisation and design processes in the next phase of advancement of Project Phoenix.

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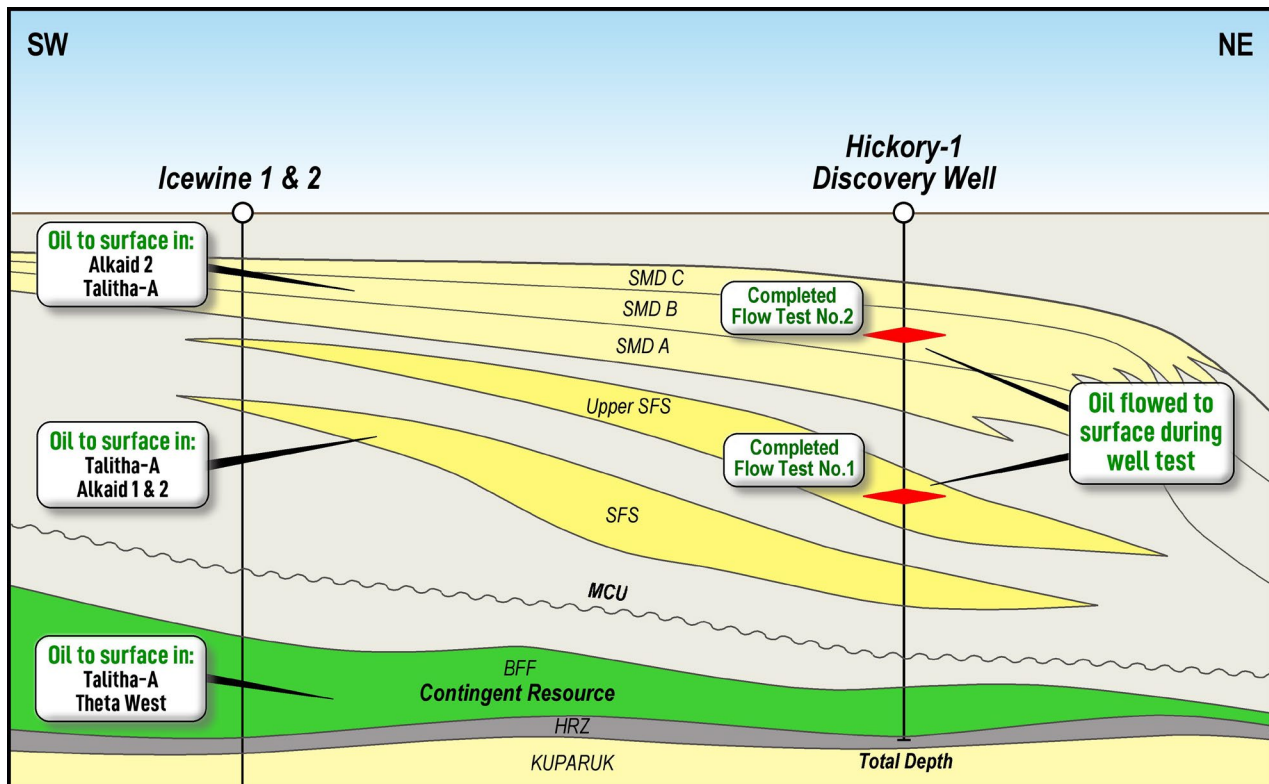


Figure 2: Successful flow tests have been conducted across multiple Project Phoenix reservoirs.

Hickory-1 flow test unlocks broader Project Phoenix potential; USFS Recap

Two separate successful flow tests were conducted at Hickory-1, over the SMD-B and Upper SFS reservoirs. As previously announced, the deeper USFS reservoir was initially tested which produced the following results:

- A 20 ft interval was perforated in the **Upper SFS reservoir** which was then stimulated via a single fracture stage of 241,611 lbs proppant volume. The zone flowed at a peak flow rate of over 70 bopd. Oil cuts increased throughout the flow back period as the well cleaned up, reaching a maximum of 15% oil cut. Once oil cut was established during the natural flow back period the well produced at an average oil flow rate of approximately 42 bopd during the natural flow back period.
- Importantly, the USFS zone flowed oil to surface under natural flow, with flow back from other reservoirs in adjacent offset wells only producing under nitrogen lift. Multiple oil samples were recovered with measured oil gravities of between 39.9 to 41.4 API (a light crude oil).

- Additionally, some NGLs were produced during the USFS test, as was anticipated in the planning phase. The presence of NGLs was demonstrated by samples from the flare line and by visible black smoke in the flare. The company anticipates NGLs produced to be at a similar rate to those observed during flow tests on adjacent acreage given the consistency of results observed between the USFS test and tests conducted on adjacent wells. It may be possible to estimate the amount of NGLs that were not measured in these tests, once fluid characterisation studies are completed in laboratory. Historically, NGLs prices on the North Slope of Alaska have been similar to, or slightly below, light oil prices and are therefore considered highly valuable. Further work is required to quantify the exact volume of NGLs, which 88 Energy intends to include as part of a maiden certified Contingent Resource assessment at Project Phoenix for the SFS and SMD reservoirs.

Forward plan

The Joint Venture will P&A the Hickory-1 well with any future appraisal and/or development activities at this location being via a long horizontal production well. The rig and associated services are expected to be off-location within the next ten days. It is anticipated that the flow test will be concluded at an estimated cost of circa US\$14.5 million gross, due to the additional length of operations.

88 Energy now plans to undertake post-test studies, including fluid testing to characterise reservoir fluids, and downhole pressure and temperature data analysis to determine reservoir properties, at distances beyond the depth of investigation of the wireline logs. These studies will then be integrated into existing data sets and models to refine appraisal and development plans for each reservoir, with pre-FEED studies expected to commence during 2H 2024. Development of these reservoirs is anticipated to be via horizontal production wells, with numerous production analogues elsewhere demonstrating many multiple times the flow rates achieved from vertical wells. Additionally, horizontal developments are common practice on the North Slope of Alaska with Conoco Phillips's Alpine and Kuparuk fields both utilising this technique.

Production rates in long horizontal production wells are typically multiples of 6 to 12 times higher than tested in vertical wells, as evidenced in many Lower 48 analogues. Project Phoenix also benefits from the ability to produce from multiple reservoirs concurrently in a development.

Commercialisation options for Project Phoenix are to be advanced in parallel, including farm-out to a strategic development partner and/or early, capital-lite production given proximate infrastructure advantages (Hickory-1 is located right next to the Dalton Highway and TAPS).

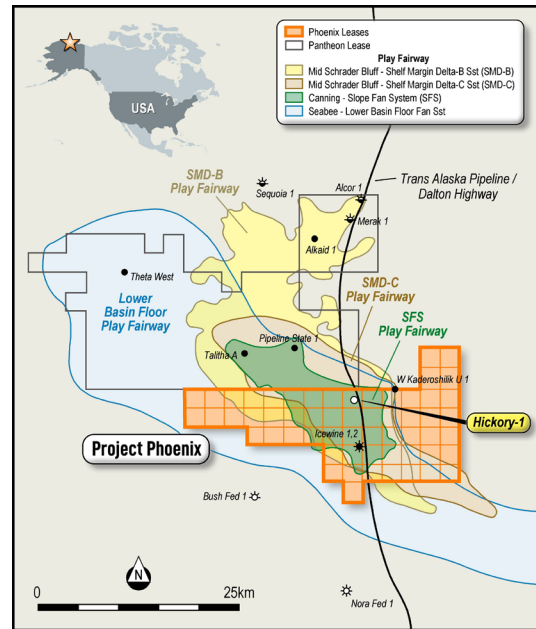
In addition, the Company plans to work with independent geological consultants to secure a Contingent Resource estimate over the SMD and SFS reservoirs (complementing the previously announced Contingent Resource estimate over the BFF reservoir; refer 88E ASX release dated 6 November 2023). Completion of these estimates is expected during Q2 2024.

Further updates on the Hickory-1 results and Project Phoenix forward plan will be announced in due course.

Additional information related to Hickory-1:

Hickory-1 is located in State lands on the North Slope of Alaska, adjacent to the Dalton Highway and Trans Alaska Pipeline, within Alaskan Oil and Gas lease ADL 392314. 88 Energy holds a ~75% working interest in the well and is Operator. The well spudded on 9 March 2023 and was drilled to a Total Depth of 10,650 feet. Multiple prospective pay zones in sandstone reservoir between depths 7,700 and 10,500 were identified.

88 Energy reported a maiden, independently certified Contingent Resource estimate of 136 MMbbl of hydrocarbon liquids (gross best estimate (2C)) and 628 BCF of gas, for the Basin Floor Fan (BFF) reservoir in Project Phoenix on 6 November 2023.



This announcement has been authorised by the Board.

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Pursuant to the requirements of the ASX Listing Rules Chapter 5 and the AIM Rules for Companies, the technical information and resource reporting contained in this announcement was prepared by, or under the supervision of, Dr Stephen Staley, who is a Non-Executive Director of the Company. Dr Staley has more than 40 years' experience in the petroleum industry, is a Fellow of the Geological Society of London, and a qualified Geologist/Geophysicist who has sufficient experience that is relevant to the style and nature of the oil prospects under consideration and to the activities discussed in this document. Dr Staley has reviewed the information and supporting documentation referred to in this announcement and considers the resource and reserve estimates to be fairly represented and consents to its release in the form and context in which it appears. His academic qualifications and industry memberships appear on the Company's website and both comply with the criteria for "Competence" under clause 3.1 of the Valmin Code 2015. Terminology and standards adopted by the Society of Petroleum Engineers "Petroleum Resources Management System" have been applied in producing this document.

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Appendix A Reporting of Material Exploration and Drilling Results Pursuant to ASX Listing Rules, Chapter 5

ASX Listing Rule	Requirement	Hickory-1 Well Test Reporting
5.30	(a) The name and type of well	Hickory-1, vertical exploration well
	(b) The location of the well and the details of the permit or lease in which the well is located	Hickory-1 is located in State lands on the North Slope of Alaska, adjacent to the Dalton Highway and Trans Alaska Pipeline, within Alaskan Oil and Gas lease ADL 392314
	(c) The Company's working interest in the well	~75%
	(d) Gross pay thickness and net pay thickness	N/A
	(e) Geological rock type of the formation drilled	Sandstone
	(f) Depth of the zones tested	SMD-B perforation interval: 7,955' – 7,975' MDRT
	(g) Types of tests undertaken and the duration of the tests	Fracture stimulate and flow test the SMD-B formation, utilising nitrogen lift. The well flowed under nitrogen lift for a period of approximately 84 hours, inclusive of clean up and recovery of frac fluids.
	(h) The hydrocarbon phases recovered in the tests	Oil was recovered during the test, with little to no measurable gas noted.
	(i) Any other recovery, such as formation water and water, associated with the tests and their respective proportions	1,551 bbls of water was recovered during flow back, consisting of frac fluids injected into the reservoir (approximately 2,144 bbls of fluid was injected during frack operations). Further analysis of fluids will be conducted post the flow test to determine extent of reservoir fluids. Total stimulation load water was not recovered and water salinity measurements indicated we were recovering load water at the conclusion of the test.
	(j) The choke size and flow rates and, if measured, the volumes of the hydrocarbon phases measured	Various choke sizes used during flow back operations from 8/64ths to 33/64ths of an inch. Total fluid flow rates (inclusive of recovery of frac fluid) averaged ~445 bbl/d over the duration of the flow back. Oil cut following establishment of production ranged from 1% to 10%. The well produced at an average oil cut of 4% following initial oil to surface, with instantaneous rates observed during the 16 hour period varying as the well continued to clean up at managed fluid flow rate of ~170 bbls/d with a calculated total volume during the flow back period following establishment of oil cut of ~4 stk bbls. No measurable gas or NGL's were recovered from the SMD-B test.
	(k) If flow rates were tested, information about the pressures associated with the flow and the duration of the test	Well head pressures over the duration of the flow back period ranged from ~200 to 1,780 psig.

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(l)	The number of fracture stimulation stages and the size and nature of fracture stimulation applied	The SMD-B zone was stimulated in a single stage and utilised a cross-linked polymer gel. The volume of sand proppant pumped was 226,967 lbs for the SMD-B.
(m)	Any material volumes of non-hydrocarbon gases, such as carbon dioxide, nitrogen, hydrogen sulphide and sulphur	The SMD-B test showed no measurable CO ₂ or H ₂ S. No other impurities were detected on site.
(n)	Any other information that is material to understanding the reported results	None

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